UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,062	06/29/2001	Robert J. Greiner	2207/11307	9316

7590 06/17/2004	**EXAMINER**
KENYON & KENYON	PATEL, NITIN C
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ART UNIT	PAPER NUMBER
2116	5

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DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-30_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-30_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 30 are presented for the examination.

Specification

2.   Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

4.   Claims 17, and 28 – 30 are objected to because of the following informalities:

It appears that claim 17 should depend on claim 14.

It appears that claim 28 should depend on claim 14.

It appears that claim 30 should depend on claim 14.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1, 14, and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Sanchez, US Patent 5,748,684.

7.   As to claims 1, 14, and 27, Sanchez teaches system and method of communication

between device [12, peripheral] and controller [14], the system comprising:

a.   a data line [16, SDO] to communicate a data signal of a frequency [inherent to the

data signal] from device [12] to controller [14][col. 4, lines 50 – 54, fig. 2, 4];

b.   a clock line [28, SCLK] to communicate a clock signal of a frequency [inherent to

clock signal] from device [12] to controller [14] [col. 4, lines 56 – 59, fig. 2, 4]; and

c.   a guard line [DRDY] to communicate a guard signal [it is inherent property of

DRDY (data ready) signal to indicate a timing for data availability] from device [12] to

controller [14][fig. 2]; wherein the data signal comprises at least device information

[erroneous data is information that device is not working properly] to be utilized by the

controller [14] [col. 3, lines 56 – 62]; the clock signal [SCLK] provides a timing

reference, for transmission by the device [12] and receipt by the controller [14], of the

data signal [SDO][col. 5, lines 53 – 67, col. 6, lines 49 – 67];

d.   said timing reference is verified through analysis [resynchronization of serial

interface inherently perform the analysis] of the guard signal [DRDY] in relation to the

clock signal [SCLK][col. 2, lines 40 – 65, col. 3, lines 56 - 62]; and

e.   data signal [SDO] synchronization occurs through recognition of a bit pattern

[pattern sequence] in the data signal [SDO][col. 2, lines 54 – 58].

8.   As to claims 3, and 16, Sanchez discloses a device [12] to recognize the receipt

[receiving data with predetermined bit pattern from controller] of the acknowledgement signal

[indicating alignment] after sensing [decoding] two consecutive [predetermined bit pattern]

binary [zero's and one's] transition [low and high][col. 2, lines 54 – 58].

9.   As to claims 4, and 17, Sanchez discloses a use of a predetermined bit pattern [sequence

of one's and zero's] therefore, he teaches binary transition [to represent one's and zero's for

predetermined pattern] from low [zero] to high [one] and high [one] to low [zero] based on the

bit pattern [sequence of one's and zero's] selected [col. 2, lines 54 – 58].

10.   As to claims 5, and 18, Sanchez discloses a use of a predetermined bit pattern [sequence

of one's and zero's] therefore, he teaches binary "high"[one's] for five consecutive cycles of

clock cycles [to represent one's and zero's for predetermined pattern][col. 2, lines 54 – 58].

11.   As to claims 6, and 19, Sanchez discloses guard signal [DRDY] operates at a specific

phase [it is inherent to DRDY signal to operate at rising edge] and utilizes substantially the same

waveform [stays high] and period as the clock signal [DRDY stays high for a data valid period].

12.   As to claims 7, and 20, Sanchez discloses guard signal [DRDY] operates at a specific

phase [it is inherent to DRDY signal to operate at falling edge] and utilizes substantially the

same waveform [maintains high] and period as the clock signal [DRDY stays high for a data

valid period] therefore, he teaches to verify timing reference [data valid period] by assuring that

the guard signal [DRDY] is at appropriate binary value given [high] a specific activity of the

clock signal [clock transition].

13.   As to claims 8 – 9, and 21 – 22, Sanchez discloses guard signal [DRDY] operates at a

specific phase [it is inherent to DRDY signal to operate at rising edge] and utilizes substantially

the same waveform [maintains high] and period as the clock signal [DRDY stays high for a data

valid period] therefore, he teaches to verify [decode] timing reference [data valid period] by

assuring that the guard signal [DRDY] is at appropriate binary value given [high] a specific

activity of the clock signal [clock transition] from 'high' to 'low' is perceived [at falling edge of

clock] the guard signal [DRDY] is at binary 'high'[high] and when transition of clock signal is

from 'low' to 'high' is perceived [at rising edge of clock], the guard signal [DRDY] is at a binary

'low' [low].

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15.   Claims 10 – 13, 23 – 26, and 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sanchez, US Patent 5,748,684 as applied to claims 1 – 9, 14 – 22, and 27 - 28

above, and further in view of Sarangi et al. [hereinafter as Sarangi], US 2002/0120882 A1.

16.   As to claims 10, and 23, Sanchez teaches a system and method of communication

between a device [12] and controller [14] with serial interface using different signals [SDO,

SCLK, DRDY, CS] and synchronization technique for serial interface using a predetermined bit

pattern [col. 2, lines 40 – 65, col. 4, lines 13 – 65, col. 5, lines 1 – 14, col. 6, lines 49 – 67, fig. 2,

4, 3B].

However, Sanchez does not teach that the device information carried by data signal

comprises a voltage identifier [VID], expressing the device's voltage requirement, which is

referenced by the controller to provide an appropriate voltage supply to device, wherein device is

a microprocessor and the controller is a voltage regulator.

Sarangi teaches a system and method for dynamic processor configuration [core voltage

and core frequency] by communicating between a device [102, processor], and a controller [122,

voltage regulator] with voltage configuration signal [112] expressing the device's voltage

requirement from device [102] and controller [122 voltage regulator] to provide an appropriate

voltage supply to the device [102 processor] after reading a voltage configuration signal [para

0026, on page 2, fig. 1, 6, and 7].

It would have been an obvious to one of ordinary skill in art at the time of invention to

combine the teachings of Sanchez and Sarangi both are commonly directed to communication

between device and controller and Sarangi's teaching of dynamic processor configuration and

power-up will provide flexibility of using same package for variety of configuration with different voltage and frequency configuration signals by reprogramming the fuse block [para 0024, 0025 on page 2].

17.   As to claims 11, and 24, Sarangi discloses a voltage controller [voltage regulator] to provide the device with an appropriate voltage supply [para 0026, page 2].

18.   As to claims 12, and 25, Sarangi discloses the device is a microprocessor [102, processor] and the controller is a voltage regulator [122, voltage regulator] [fig.1].

Allowable Subject Matter

19.   Claims 2, 15, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
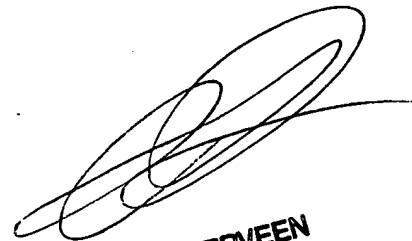
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin C. Patel whose telephone number is 703-305-3994. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Brown can be reached on 703-308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nitin C. Patel
June 3, 2004

REHANA PERVEEN
PRIMARY EXAMINER